Amendments to the claims:

1. (not entered) A thermoluminescence detector having a coded cover layer, said cover layer consisting of a silicon resin having pigment particles finely distributed therein, said layer having a thickness of 30 to 50 µm and having a code burnt into said cover layer by quantitative evaporation of areas of the cover layer by means of a laser in accordance with a selectable pattern.

2. (not entered) A thermoluminescence detector according to claim 1, wherein said pigment particles are black iron oxide particles with a particle size of 2 - 4 µm.

3. (not entered) A thermoluminescence detector according to claim 1, wherein the pigment content in said cover layer is between 50 and 60 %.

4. (original) A method for the manufacture of thermoluminescence detectors with a coded cover layer, comprising the following steps:

a) coating thermoluminescence crystals with a pigmented silicon including a solvent resin to form a uniform cover layer,

b) pre-tempering said cover layer at a temperature of about 100°C for 15 min so as to evaporate to a large extent the solvent from the cover layer,

c) coding the cover layer by almost quantitative vaporization of areas of the cover layer by means of a laser in accordance with a selectable pattern, and

d) tempering the coded cover layer at a temperature of 170 - 400°C.

5. (original) A method according to claim 4, wherein thermoluminescence crystals are held by a holder in an orderly two-dimensional array and are removed from said holder before final tempering.

6. (original) A method according to claim 4, wherein said said thermo-luminescence crystals are coated with said silicon resin by a spray painting procedure.

7. (new) A method as claimed in claim 4, wherein said cover layer has a thickness of 30 to 50 µm .

8. (new) A method as claimed in claim 4, wherein said pigment particles are black iron oxide particles with a particle size of 2 - 4 µm.

9. (new) A method as claimed in claim 4, wherein the pigment content in said cover layer is between 50 and 60 %.